

issues subsequent to final rejection. Entry is therefore believed to be in order and is respectfully requested.

In the Office Action, claims 1 and 4-11 remain rejected under 35 USC § 103 as being unpatentable over U.S. Patent No. 5,338,474 to Kaiserman, for reasons of record set forth in Paper # 4, dated September 20, 2001. Further, claims 1 and 4-15 were rejected under 35 U.S.C. 103 as being unpatentable over Kaiserman or WO No. 98/03621 to Ofosu-Asante, also for reasons of record in Paper # 4. Specifically, the Examiner states that Kaiserman teaches a system for releasing peracids from peroxygen bleach sources using esterase enzymes and that the bleaching system comprises a peracid bleach precursor which may be any diacyl peroxide, including those instantly recited in claim 1. Further, the Examiner specifically asserts that it would have been obvious to one of ordinary skill in the art to formulate "a bleaching composition having the specific pH containing a specific diacyl peroxide which provides stain removal and improved fabric color safety as recited by the instant claims", with a reasonable expectation of success and similar results with respect to other disclosed components, because the broad teachings of Kaiserman or '621 suggest such a bleaching composition having the specific pH containing a "specific diacyl peroxide which provides stain removal and improved fabric color safety as recited by the instant claims."

For the reasons stated below, buttressed by the Declaration, including evidence of what is well-known among ordinary practitioners in the detergent formulation arts contained herein, Applicants strongly disagree. These rejections are traversed and reconsideration is respectfully requested.

The present invention is defined by independent claims 1, 12 and 15, and the claims dependent therefrom. Claim 1 is directed to a method for removing stains from fabrics and improving fabric color safety. The method comprises the step of contacting a soiled fabric with a bleaching composition comprising a diacyl peroxide of a particular structural formula

having an R_1 and an R_2 , wherein R_1 is a linear aliphatic group having from 1 to 30 carbons atoms and is linear, branched, cyclic, saturated, unsaturated, substituted, unsubstituted or mixtures thereof, and R_2 is an aromatic group which is mono or poly cyclic, homo or heteroatomic, substituted or unsubstituted, or mixtures thereof, and wherein the composition has a pH of between about 2 to about 5. Claim 12 is directed to a more specific method for removing stains from fabrics and improving fabric color safety. The method comprises the step of contacting a soiled fabric with an aqueous liquid bleaching composition. The liquid bleaching composition comprises (1) from 0.05 to 10% by weight a stain removal and fabric color improving agent which consists essentially of a diacyl peroxide of a particular structural formula having an R_1 and an R_2 , wherein R_1 is a linear aliphatic group having from 1 to 30 carbons atoms and is linear, branched, cyclic, saturated, unsaturated, substituted, unsubstituted or mixtures thereof, and R_2 is an aromatic group which is mono or poly cyclic, homo or heteroatomic, substituted or unsubstituted, or mixtures thereof, (2) 0.01 to 30% of a bleach activator, (3) a surfactant system comprised of at least one surfactant, and (4) on or more optional ingredients selected from a recited Markush group. Claim 15 is also directed to a specific method for removing stains from fabrics and improving fabric color safety. The method comprises the step of contacting a soiled fabric with a stain removal and fabric color safety improving agent. The agent consists essentially of from 0.05 to 10% a diacyl peroxide of a particular structural formula having an R_1 and an R_2 , wherein R_1 is a linear aliphatic group having from 1 to 30 carbons atoms and is linear, branched, cyclic, saturated, unsaturated, substituted, unsubstituted or mixtures thereof, and R_2 is an aromatic group which is mono or poly cyclic, homo or heteroatomic, substituted or unsubstituted, or mixtures thereof, and wherein the agent is provided in a composition having a pH of from 2 to 5.

Kaiserman, on the other hand, directed to a composition for the release of bleach peracid in wash comprising a peracid bleach precursor enzyme substrate which is a diacyl of

a general structure having an R and R₁, wherein R and R₁ are the same or different and are selected from group consisting of saturated or unsaturated alkyl having 1 to 20 carbons, aryl and alkaryl, and a lipase enzyme. There is no limitation in Kaiserman as to the precise association of these substituent classes, and Kaiserman specifically recites that R and R₁ may be the same or different.

It is a fact, as the Examiner points out, that Kaiserman and Ofosu disclose and teach specific diacyl peroxides. But those diacyl peroxides are distinct from the instantly recited diacyl peroxides, not only structurally, but in terms of the characteristics they impart to deterative compositions comprising them. The instant method claims utilize compositions which must comprise mixed diacyl peroxides. That is, one R substituent must be alkyl, while the other is aryl. This particular structure is critical to the asserted "fabric color safety", recited in the instant claims themselves, taught in the specification, and supported by the Declaration contained herewith. The Kaiserman disclosure, including both text and exemplar illustrations, teaches exactly one diacyl peroxide (hereinafter, DAP), - benzoyl peroxide. Benzoyl peroxide, also known as di-benzoyl peroxide, is a DAP wherein the R groups are both aryl. Kaiserman suggests aryl-alkaryl combinations as well, but this is merely a subtype of the aryl-aryl combination. Since Benzoyl peroxide is the only specific DAP mentioned in Kaiserman, Applicants must conclude that it is the specific DAP to which the Examiner refers when he repeatedly asserts that one of ordinary skill in the art could expect a reasonable expectation of success and similar results with respect to the instantly disclosed components. Applicants further note that, as an aryl-aryl peroxide, benzoyl peroxide is not a compound as defined by the present inventive compositions.

Ofosu-Asante (Ofosu) teaches a method for stain removal on fabric with detergent compositions containing bleach. Claim 1 is directed to a method for treating fabrics comprising contacting the fabrics, in the presence of a solvent that generates heat under

microwave radiation, with a treating composition comprising a bleaching agent, and subjecting the fabric to microwaves for a sufficient period to effectively treat the fabric. Dependent claim 3 recites a Markush group of bleaching agents, including diacyl peroxide, and dependent claim 6 recites a Markush group of diacyl peroxides, including dibenzoyl peroxide as well as 6 other aryl-aryl DAPs, and the single aryl-alkyl DAP, benzoyl succinyl. Dependent claim 7 specifies that the R substituents can be the same or different, and dependent claim 8 recites the method of claim 1 wherein the composition has a neat pH of from 3 to 10 such that the DAP remains undissolved.

Ofosu fails to consider or disclose methods or compositions directed to improving fabric color safety. In fact, all but one of the disclosed Ofosu DAPs are of the aryl-aryl species, and Ofosu explicitly discloses that R substituent combinations are not an important. Ofosu's invention, which is directed to "stain removal", and which is disclosed as particularly efficacious on stains such as tomato and tea stains, is intended to remove coloring agents. There is no teaching or suggestion that these compositions improve fabric color safety. Applicants wish to draw Examiner's attention to the examples of the specification. The examples directed to laundry detergents specifically comprise aryl-aryl DAPs. Mixed DAPs represent only a single suggested DAP, benzoyl succinyl peroxide, and it is disclosed in the specification as one of 8 possible DAPs, the others all being aryl-aryl, and even then, is only disclosed in the context of dishwashing, not textile care.

Applicants draw attention to the Declaration and the evidence of general knowledge within the industry enclosed herein. As discussed in paragraph 3 of the Declaration, the documents attached thereto evidence that diaromatic peroxides, in particular, benzoyl peroxide, have the well-known property of being damaging to fabrics in general, and color fabrics in particular. For example, "Drycleaning", published by the Better Business Bureau, page 4, para. 4, states "[s]kin care preparations containing benzoyl peroxide also require

special care in use. Benzoyl peroxide is a bleaching agent and can cause permanent areas of color loss on towels and clothing"; and (2) "Chemical Spots, Stains and Discoloration of Home Furnishings, published by the Nebraska Cooperative Extension, pages 2 and 3, relevantly states, *inter alia*, "Benzoyl peroxide is a strong oxidizing and/or bleaching agent which is capable of destroying most dyes used in carpet and upholster fabrics. Other textiles such as pillowcases, sheets, towels and clothing may be affected also. *Manufacturers have estimated that a high percentage of unidentifiable spots on carpets can be attributed to this chemical.*" These documents provide direct evidence that harshness of benzoyl peroxide with respect to fabric color safety is commonly known by ordinary practioners of detergent arts.

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/ The Declaration further evidences experimental results obtained by the present inventors which show that the instantly claimed DAPs, i.e. necessarily mixed aryl-alkyl DAPs, and the methods which utilize compositions comprising them, are patentably distinguishable because they afford good fabric color safety (see Decl. paras 4-6).

Applicants submit these documents with the belief that they will render the patentably distinguishable features of the present inventive methods apparent to the Examiner. Applicants fail to see where the narrow Kaiserman disclosure, which teaches BPO, commonly known as damaging to fabric color, as the sole diacyl peroxide, can be the basis for an obviousness rejection of the present invention. Even the undue breadth of the claim language, which Examiner argues to be suggestive of the present invention, does not render the present invention obvious since it merely recites random combinations of the acyl substituents, without regard to fabric color safety. Applicants fail to see where the Ofosu disclosure, which also teaches random DAP substituents and only teaches aryl-aryl DAPs in the specification with regard to laundry can provide the basis for an obviousness rejection of the instant invention as well. Applicants repeat, for emphasis, that the instant methods are patentably distinguishable from either Kaieserman or Ofosu because they utilize

compositions which mandate mixed substituent combinations in the DAP, and because they improve color safety. Neither of these limitations is found in the cited references.

To establish prima facie obviousness of the claimed invention, all the claim limitations must be taught or suggested by the prior art, *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (CCPA 1974). Kaiserman simply does not address the fabric color safety, and only discloses DAPs which inherently damage color fabric. Furthermore, references relied upon to support a rejection under 35 U.S.C. §103 must provide an enabling disclosure, i.e., they must place the claimed invention in the possession of the public, *In re Payne*, 203 U.S.P.Q. 245 (CCPA 1979). The rejection should therefore be reversed. Kaiserman provides absolutely no teaching or suggestion of methods for laundering which provide any fabric color safety, and, in fact, inherently teaches the opposite. For these reasons, Applicants submit that the rejections under 35 U.S.C. § 103 of claims 1 and 4-11 over Kaiserman, and the rejections under 35 U.S.C. § 103 over Kaiserman and Ofosu-Asante of claims 1 and 4-15 are overcome. Reconsideration is respectfully requested.

Respectfully submitted,

By: 

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